REMARKS

By this amendment, applicants have amended the claims to correct typographical errors, including the informality noted by the Examiner in numbered section 1 of the office action. In view of the foregoing amendments to the claims, including the amendment to claim 1, reconsideration and withdrawal of the objection to claim 1 are requested.

Claims 1 - 3 stand rejected under the judicially created doctrine of obviousness-type double patenting as being unpatentable over claim 1 of US Patent No. 6,287,088. In response to this rejection, applicants are submitting herewith a timely filed terminal disclaimer in compliance with 37 CFR 1.321(c). The terminal disclaimer has been filed in order to advance the prosecution of the subject application and is not an admission of the propriety of the double patenting rejection.

Claim 1 stands rejected under 35 USC 102(b) as being anticipated by United States Patent No. 5,674,063 to Ozaki et al. Applicants traverse this rejection and request reconsideration thereof.

Claim 1 is directed to an oil free screw compressor in which the first and second bearings for supporting the male rotor and the female rotor, as well as the third bearing for rotating and supporting the motor shaft, are made the same with respect to each other. An oil free screw compressor operates to compress a large amount of gas; to do so, it is desirable to increase the rotation to a maximum rotation of, e.g., 20,000 rpm. Since motors having such a high capacity, i.e., a maximum rotation speed of 20,000 rpm, are generally not available, it has become necessary to manufacture a high speed motor for exclusively for use with an oil free screw compressor.

Applicants have found that by making the bearing for rotating and supporting the motor shaft of the same type as the bearings for supporting the male and female rotors, advantageous results can be obtained. In the first place, since the bearings used for supporting the male and female rotors of the oil free screw compressor are highly reliable, the reliability of the oil free screw compressor, including the high speed motor, can be improved. In addition, by using bearings of the same type for rotating and supporting the motor shaft and for supporting the male and female rotors, parts of the bearings can be used in common and the manufacturing cost thereof can be lowered.

The patent to Isaki et al discloses a screw fluid machine and a screw gear used in the same. The Examiner refers to Figure 11 of this patent which shows the arrangement of male and female rotors 101 and 102 in a main casing 109 and an auxiliary casing 117. While the Examiner refers to element 107 as being the motor shaft, elements 107 and 108 are rotational shafts of the male rotor and female rotor, respectively. The rotors 101 and 102 are freely rotatably supported through bearings 111 and 112 which are secured to an end plate 110 for sealing one end surface of the main casing 109, and bearings 118 and 119 which are secured to an auxiliary casing 117. Thus, bearing 118 is not for rotating and support a motor shaft, but for rotatably supporting a rotational shaft 107 of the male rotor 101. This patent does not disclose the bearing used for the motor shaft. This patent certainly does not disclose that any bearing for supporting the motor shaft is the same as the bearings for supporting the rotors.

For the foregoing reasons, the Isaki et al patent does not anticipate claim 1.

Claim 1 stands rejected under 35 USC 102(b) as being anticipated by United States Patent No. 4,664,601 to Uchida et al. Applicants traverse this rejection and request reconsideration thereof.

The patent to Uchida et al discloses an operation control system of a rotary displacement type vacuum pump. The Examiner refers to Figure 2 of this patent which discloses a male rotor 4 and a female rotor 5 located in a main casing 1 and journaled by bearings 7 mounted in stuffing boxes 6. Ball bearings 8 are provided to maintain the male rotor 4 and the female rotor 5 against axial movement. Thus, bearings 7 and 8 support the male and female rotors, not the motor. This patent discloses that a high frequency motor is connected through a coupling 15 to one end of the shaft of the male rotor. The patent specification does not disclose the type of bearings used for the high-frequency motor. This patent certainly does not disclose that any bearing used for the high-frequency motor should be made the same as the bearings for supporting the male and female rotors 4 and 5. Accordingly, this patent does not disclose the presently claimed invention.

In view of the foregoing amendments and remarks, favorable reconsideration and allowance of all of the claims now in the application are requested.

To the extent necessary, applicants petition for an extension of time under 37 CFR 1.136. Please charge any shortage in the fees due in connection with the filing of this paper, including extension of time fees, to the deposit account of Antonelli,

Terry, Stout & Kraus, LLP, Deposit Account No. 01-2135 (Case: 500.37529CC3), and please credit any excess fees to such deposit account.

Respectfully submitted,

ANTONELLI, TERRY, STOUT & KRAUS, LLP

Alan E. Schiavelli
Registration No. 32,087

AES/jla
(703) 312-6600
Attachment